Feature-rich HP ProLiant DL360 G5 ranked in the top 3 energy efficient performance per watt benchmark results

The HP Difference

Combining concentrated 1U compute power, integrated Lights-Out management, and essential fault tolerance, the DL360 is optimized for space constrained data center installations.

Key benefits:

- **Energy efficient performance from feature-rich enterprise class server on SPECpower_ssj™2008 benchmark**
- **HP ProLiant servers hold 2 of the top 3 positions for 2-processor computing**
- **The DL360 G5 comes standard with the following enterprise class features:**
  - **iLO 2 robust remote management**
  - **HP Smart Array controller with RAID**

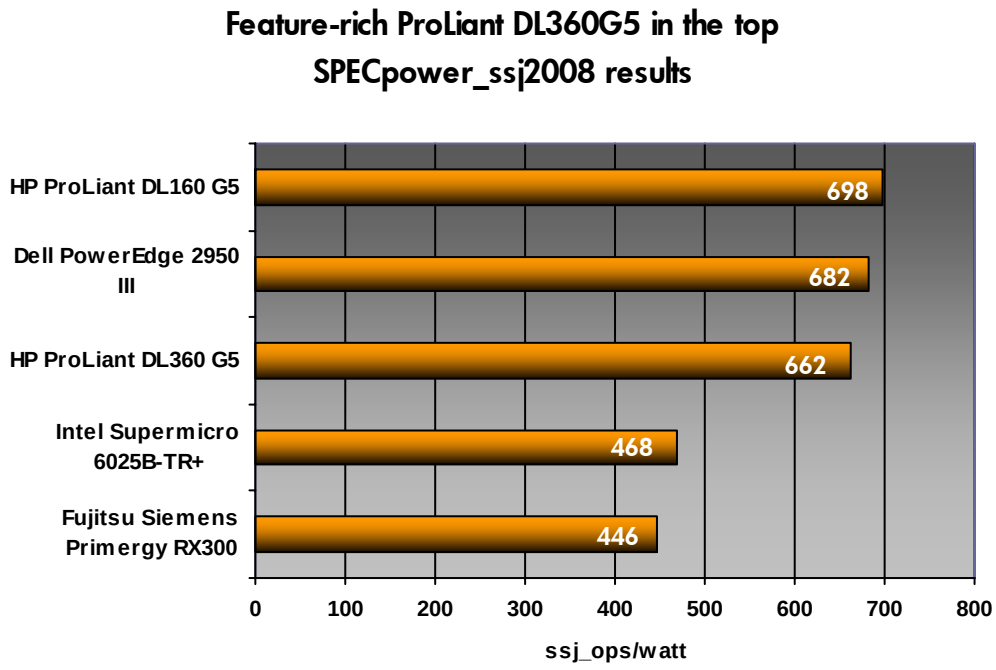
The Dell PowerEdge 2950 does not offer equivalent remote management or RAID standard.

The HP ProLiant DL360 G5 demonstrated energy efficient performance on the SPECpower_ssj™2008 benchmark with a two-processor performance of **662 overall ssj_ops/watt.** This result helped HP attain 2 of the top 3 positions for SPECpower performance per watt benchmarks. SPECpower_ssj™2008 is the first generation SPEC benchmark for evaluating the power and performance characteristics of server class computers. This measurement provides a way to compare the energy efficiency of servers.

The HP DL360 G5 shows energy efficiency in a feature-rich server!

More information about SPECpower benchmark results for all servers can be found at the following Web page: http://www.spec.org/power_ssj2008.

Figure 1. Comparison of SPECpower_ssj™2008 results of the HP ProLiant DL360 G5 two-processor Quad-Core server vs. other two-processor servers (All results as of 01-15-08).



ProLiant server configuration

The HP ProLiant DL360 G5 was configured with the Intel Xeon E5450 3.0GHz processors with 8 cores/2 chips/4 cores per chip, 2x6MB L2 shared cache, 1333MHz system bus, 16GB (4x4GB) low power (LP) PC2-5300F memory, 1 x 60GB 5.2K-rpm SFF 2.5-inch SATA drive, and an embedded HP Smart Array P400 controller. The ProLiant DL360 G5 was running Microsoft Windows Server 2003 x64 Enterprise Edition (EE) R2 and used one 700W power supply.

Two-processor comparison

Table 1. Configuration comparison of 2-processor benchmark competitors

2-socket server	overall ssj_ops/watt	Operating System
HP ProLiant DL160 G5 Intel Xeon E5450, QC, 8/2/4, 16GB RAM LP	**698**	**Microsoft Windows Server 2003 x64 Enterprise Edition R2**
Dell PowerEdge 2950 Intel Xeon E5440, QC 8/2/4, 16GB RAM	**682**	**Microsoft Windows Server 2003 x64 Enterprise Edition SP2**
HP ProLiant DL360 G5 Intel Xeon E5450, QC, 8/2/4, 16 GB RAM LP	**662**	**Microsoft Windows Server 2003 x64 Enterprise Edition R2**
Intel Supermicro 6025B-TR+ Intel L5335, QC 8/2/4, 8GB RAM	**468**	**Microsoft Windows Server 2003 x64 Enterprise Edition SP2**
Fujitsu Siemens PRIMERGY RX300 Intel Xeon L5335, QC 8/2/4 16GB RAM	**446**	**Microsoft Windows Server 2003 x64 Enterprise Edition SP2**

All results as of 01-15-08.

What SPECpower_ssj2008 measures

Currently, many vendors report some energy efficiency figures, but these are often not directly comparable due to differences in workload, configuration, test environment, etc. SPEC defines server power measurement standards in the same way it has done for performance. Development of this benchmark provides a means to measure power in conjunction with a performance metric. This should help IT managers to consider power characteristics along with other selection criteria to increase the efficiency of data centers.

Being a Standard Performance Evaluation Corporation (SPEC) benchmark, SPECpower_ssj™2008 is a consortium-policed benchmark that provides a way for server vendors to compare benchmark results in a fair manner.

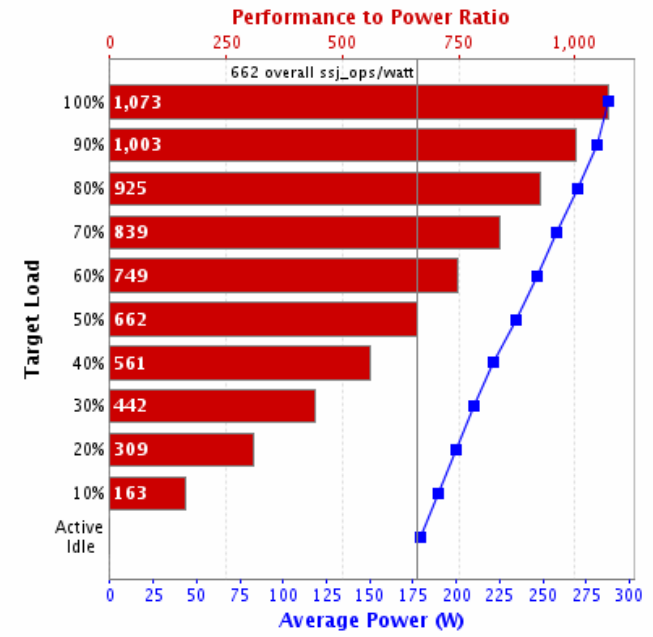


Figure 2. The SPECpower_ssj™2008 primary metric is the "overall ssj_ops/watt". The HP ProLiant DL360 G5 showed a 662 overall ssj_ops/watt ratio. This metric is computed by taking the sum of the ssj_ops scores for all target loads, and then dividing by the sum of the power consumption averages for all target loads – including the "active idle" (0% utilization) measurement interval.

For more information

HP ProLiant DL360 G5: www.hp.com/servers/dl360

HP ProLiant benchmarks: www.hp.com/servers/benchmarks

For more information on SPEC benchmarks: www.spec.org

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